

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

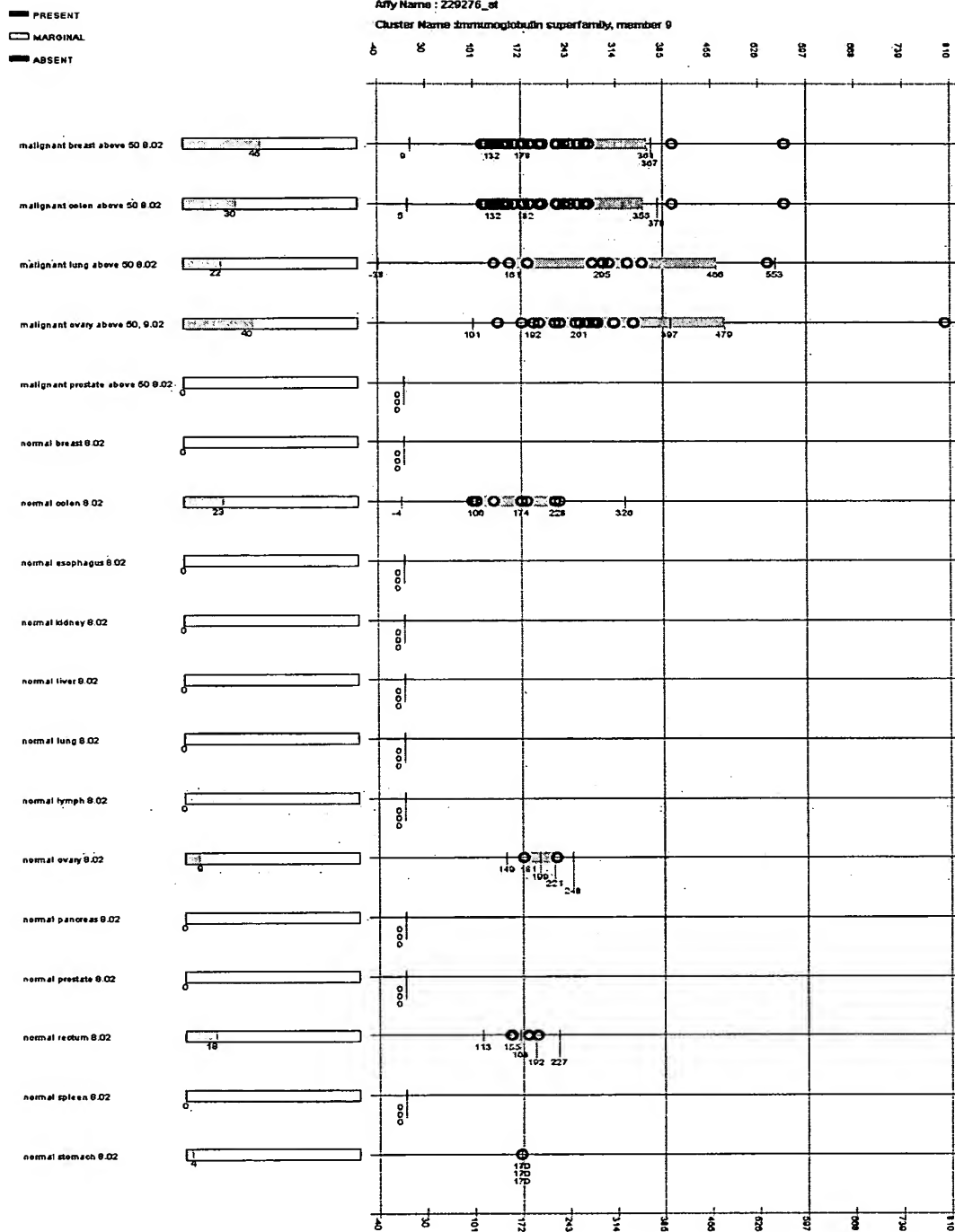


**Figure 1B**

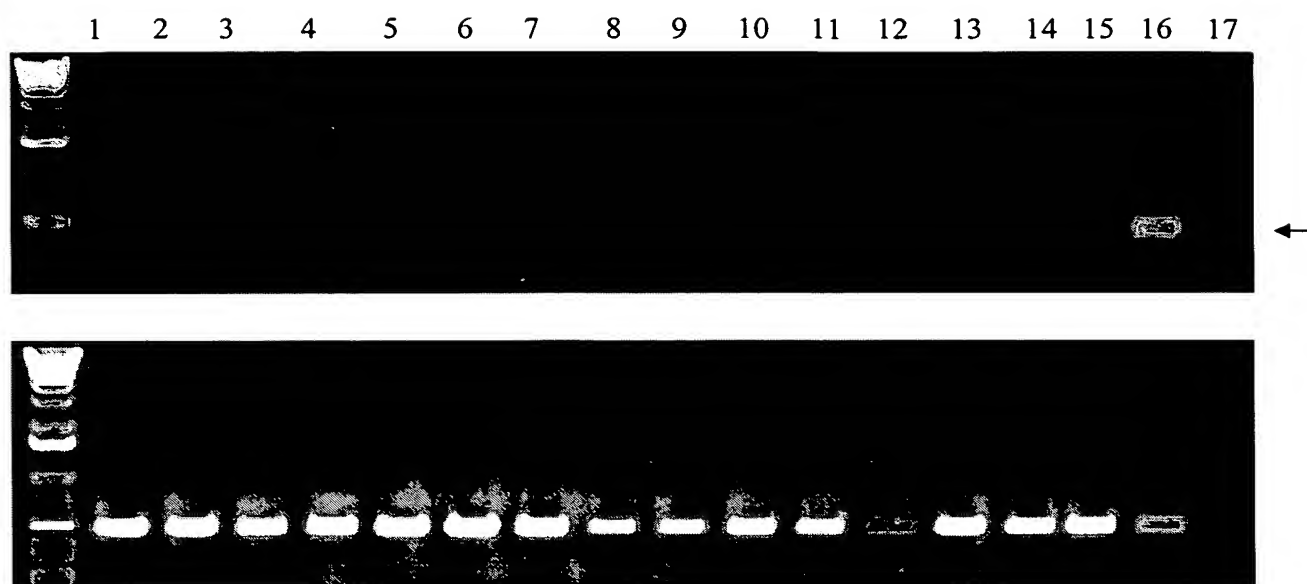
Homo Sapiens IGSF9 Protein sequence

MVWCLGLAVLSLVISQGADGRGKPEVSVVGRAEESVVLGCDLLPPAGRPPLHVIENLRFGLLLPIFIQGLYSPRIDPDYVGRVRLQKGASLQIEGLRVE  
DQGWYECRVFFLDQHIPEDDFANGSWVHLTVNSPPQFQETPPAVLEVQELEPVTILRCVARGSPPLPHVTWKLRGKDLGGQGQVQVQNGTLRIRRRVERGSSG  
VYTCQASSTEGSATHATQLLVLGPPVIVVPPKNSTVNASQDVSLACHAEAYPANLTYSWFQDNINVFHISRLQPRVQILVDGSLRLLATQPD DAGCYTCVP  
SNGLLHPPSASAYLTVLCMPGVIRCPVRANPPLL FVSWTKDGKALQLDKFPGWSQTEGSLIIALGNEDALGEYSCTPYNSLGTAGSPVTRVLLKAPPAF  
IERPKEEYFQEVGRELLI PCSAQQDPPPVVSWTKVGRGLQGQAQVDSNSSLILRPLTKEAHGHWECSSASNAVARVATSTNVVVLGTSPHVVTNVSVVALPK  
GANVSWEPGFDGGYLQRFVWYTPLAKRPDRMHHDWVSLAVPVGA AHLLVPGLQPHQTQYQFSVLAQNKLGGPFFSEIVLSAPEGLPTTTPAAPGLPPTTEIPP  
PLSPPRGLVAVRTPRGVLLHWDPPPELVPKRLDGYVLEGRQGSQGWEVLDP AVAGTETELLVPGLIKDVLVEFRLVAFAGSFVSDPSNTANVSTSGLEVYPS  
RTQLPGLLPQPVLAVVGGVCF LGVAVLVSILAGCLLNRRRAARRRRKRLRQDPPLIFSP TGKSAAPSALGSGSPDSVAKLKLQGSVPVPSLRQSLLLWGDPA  
GTPSPHPDPPSSRGPLPLEPICRGPDGRFVMGPTVAAPQERSGREQAEPRTPAQRLARSFDCSSSSSGAPQLCIEDISP VAPPPAAPSPPLPGPGPLLQ  
YLSLPFFREMNVGDWPPLEEPSAAPPDYMDTRRCTSSFLRSPETPPVSPRESLPGAVVGAGATAEPPYTALADWTLRERLLPGLLP AAPRGSLTSQSS  
GRGSASFLRPPSTAPSAGGSYLSAPAGDTSSWASGPERWPRREHVVTVSKRNTSVDENYEWDSFFPGDMELLETLHLGLASSRLRPEAETELGVKTPPEG  
CLLNTAHVTGPPEARCAALREEFLAFRRRRRDATA RARLPAYRQPVPHPEQATLL

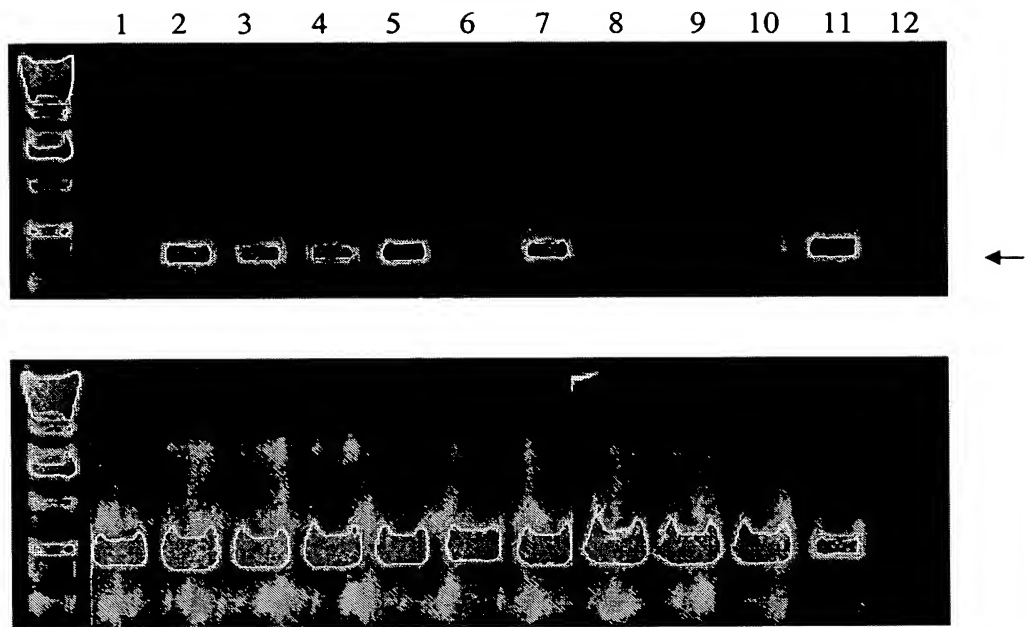
# Figure 2



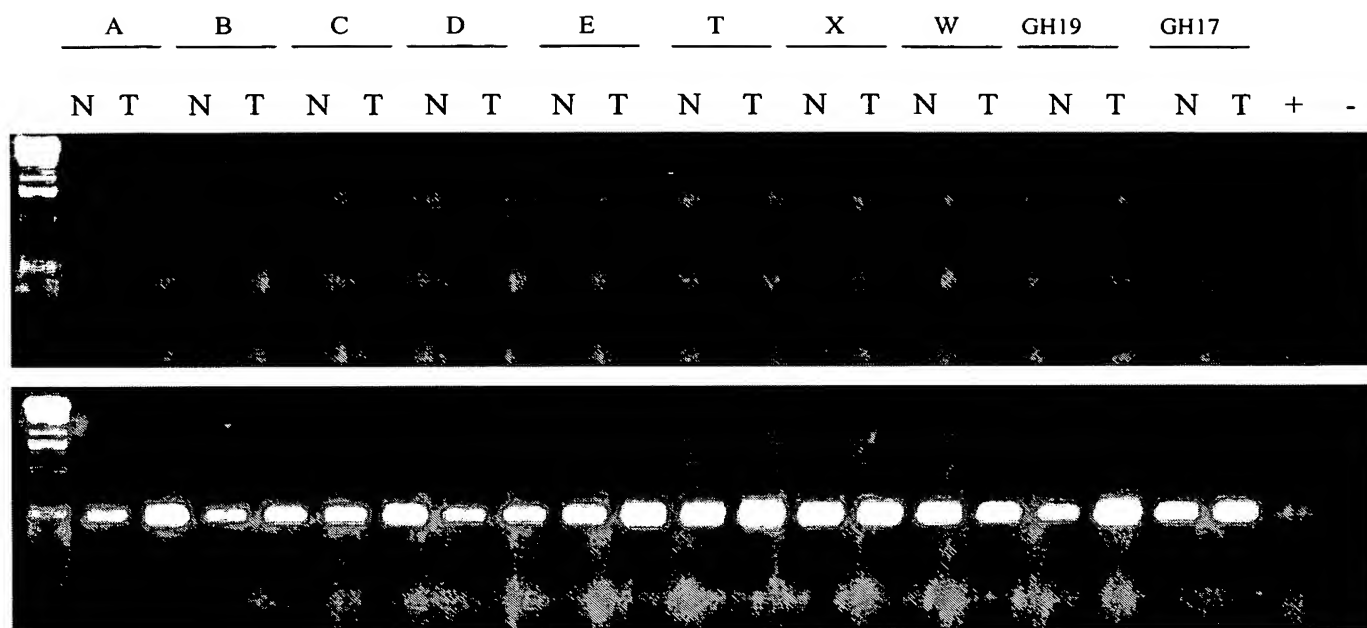
**Figure 3**



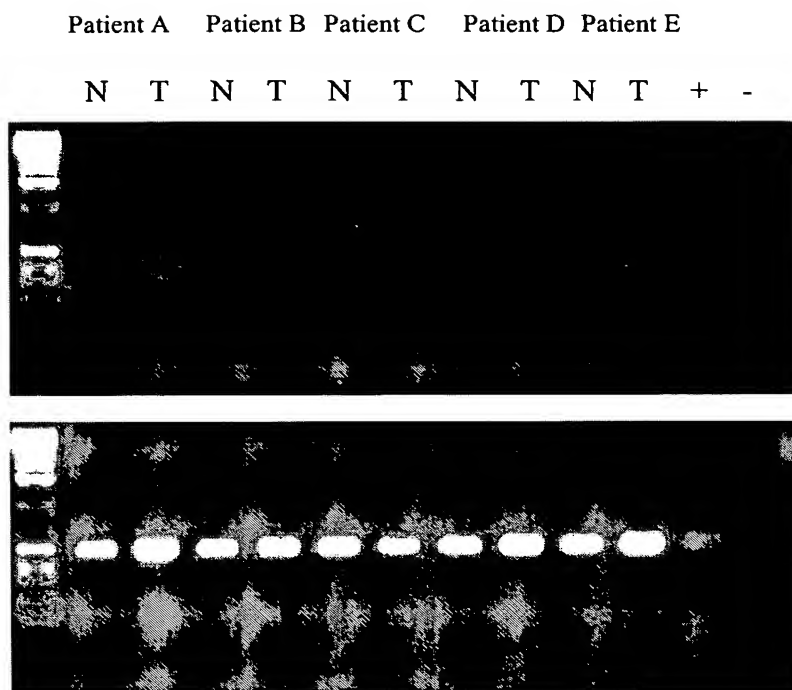
**Figure 4**



**Figure 5**



**Figure 6**



**Figure 7**

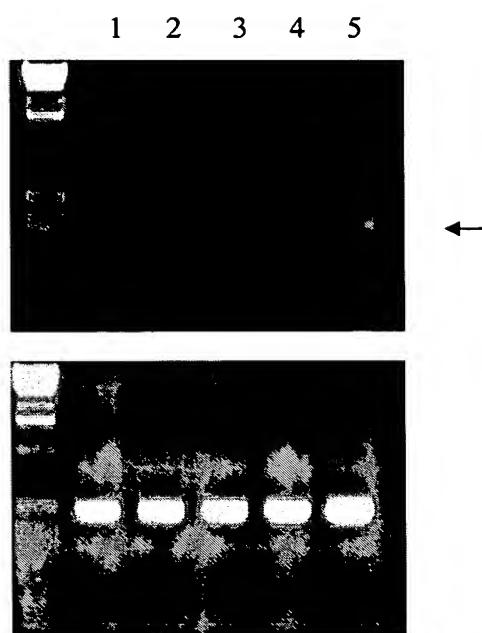
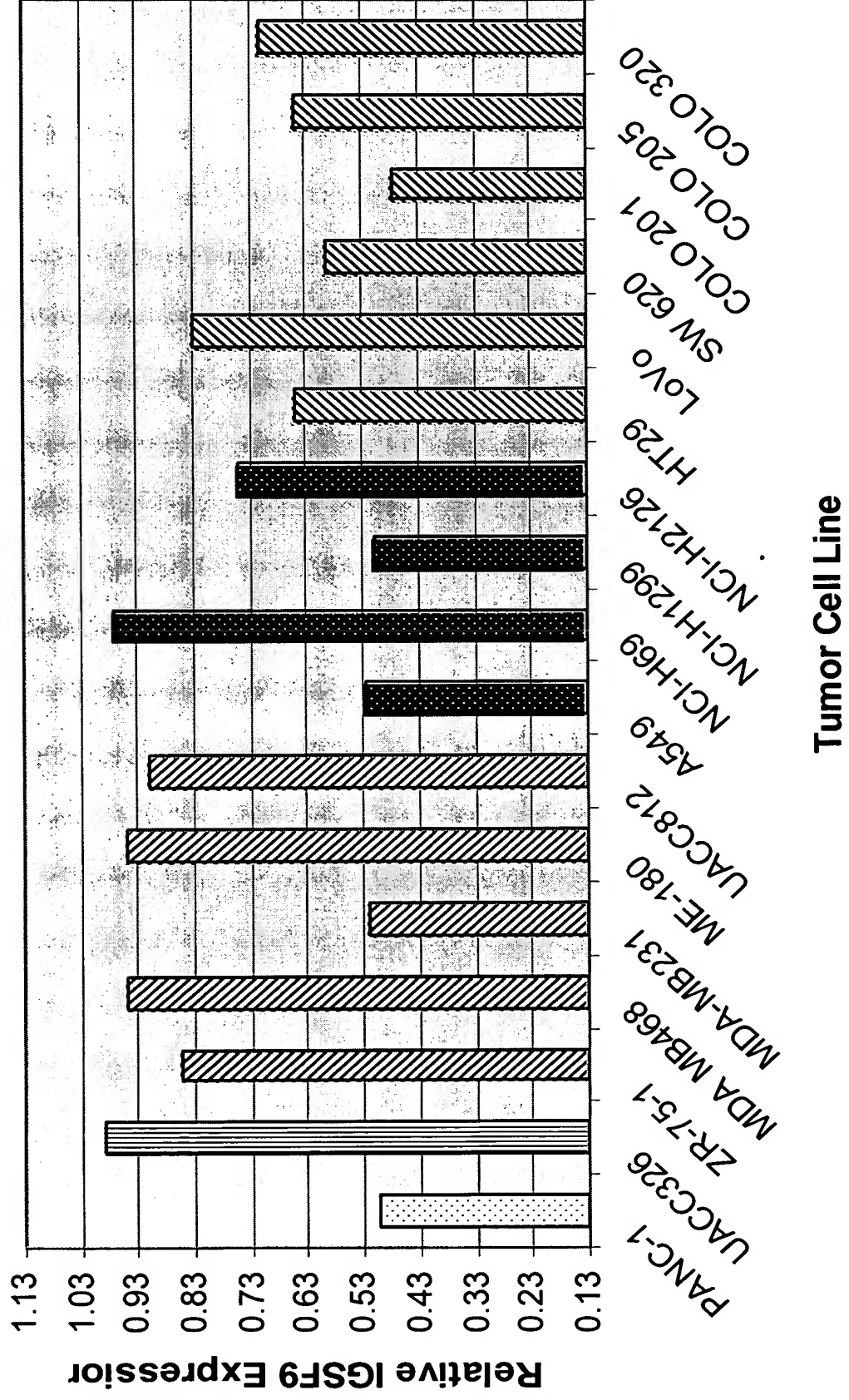


Figure 8

# IGSF9 Expression in Tumor Cell Lines



## Figure 9

### (A) Short form soluble IGSF9-Ig nucleotide sequence

atgggtgtggtgcctcggcctggccgtcctcagcctgggtcatcagccaggggggtgacggctcaggggaagcctgaggtgg  
taccggtggtgggcccgggctgaggagagtgtggtgctgggctgtgacctgctgccccggccggccggccccctgca  
tgtcatcagtggtgcgcttggattcctgcttccatctcattccagttcgccctctacttccccgaattgacctgattacg  
tgggacgagtcgggctgcagaagggggcctctctccagattgagggctccgggtggaagaccagggctggtagagtg  
ccgctgttcttctggaccagcacatccctgaagacgatttctgaacggctcctgggtgcatctgacagtcaattcacccc  
ctcaattccaggagacacctcctgctgtgttggaagtgcaggaaactggagcctgtgacctgctgtgtggccgtggca  
gccccctgcctcatgtgacgtggaagctccgaggaaaggaccttggccagggccagggccaggtgcaagtgcagaacg  
ggacgctgcggatccgcccgggtagagcgaggcagctctggggtctacacctgccaaagcctccagcactgagggcagcg  
ccaccacgccaccagctgtagtgtaggacccccagtcacgtggtgcccccaagaacagcacagtcaatgcctcc  
caggatgtttcattggcctgccatgctgaggcataacctgctaacctcacctacagctggtccaggacaacatcaatgtctc  
cacattagccgctgcagccccgggtgcagatcctgggtggacgggagcctgcggctgctggccaccagcctgatgatg  
ccggctgtacacctgtgtgccagcaatggcctcctgcatccacctcagcctctgctacctcactgtgctctgcatgcc  
gggggtgatccgctgcccgggtcgtgccaaacccccactgctcttctcagctggaccaaggatggaaaggccctgcagc  
tgacaagtccctggctggctcccagggcacagaaggctcactgatcctgcccggggaacgaggatgcctgggaga  
atactctgcacccccctacaacagcttggtagcgccgggccccctctctgtgaccgcgtgctgctcaaggctccccagct  
tttatagagcggcccaaggaagaatattccaagaagtagggcgaggctgctcatccctgctccgcccaaggggaccc  
tctcctgttctcttggaccaaggtgggcccgggggtgcaaggccaggcccaggtggacagcaacagcagcctcatc  
ctgcgaccattgaccaaggaggcccacgggactgggaatgcagtgccagcaatgctgtggccgagtgggcacctcc  
acgaacgtctacgtgctgggactagccctcatgtgtaccaatgtgtccgtgggtgcttggccaagggtgccaatgtctc  
ctgggagcctggctttagtggtggtatctgcagagattcagtgctgtgtacacccactggccaagcgtcctgaccgaatg  
caccatgactgggtgtccttggcagtgctgtgggggtgctcacctcctagtgccagggctgcagccccacaccagta  
ccagttcagcgtgtagctcagaacaagctgggagtggtccctcagcgaaatcgtctgtctgctccggaagggttctc  
accacgccagctgcacccgggcttcccccaacagagataccgcctccctgtcccctccgcggggtctggtggcagtga  
ggacacccccgggggtactcctgcattgggatccccagagctggtccctaagagactggatggctacgtcttggaaaggc  
cggcaaggctcccaggggtgggaggtgctggaccggctgtggcaggcacagaaacagagctgctggtgccaggcct  
catcaaggatgttctctacagttccgctcgtggccttcgcgggcagcttcgtcagcgacccagcaacacggccaacgt  
ctccacttccggtctggaggtctaccttcgcgcacgcagctgccgggctcctgctcagcccttagccaggagcccaa  
aagctctgacaaaactcacatccccaccgtccccagcacctgaactcctggggggaccgtcagttctcttcccccc  
aaaacccaaggacacctcatgatctccggaccctgaggtcatatgcgtggtggtggacgtgagccacgaagacct  
gaggtcaagttaactggtacgtggacggcgtggaggtgcataatgccaaagacaaagccgcgggaggagcagtacaac  
agcacgtaccgtgtggtcagcgtcctcaccgtcctgcaccaggactggctgaatggcaaggagtacaagtgaaggtctc  
caaaaaggcctcccagccccatcgagaaaaccatctcaaagccaaagggcagccccgagaaccacaggtgtacac  
cctgcccccatccgggatgagctgaccaagaaccaggtcagcctgacctgctggtcaaaggcttctatcccagcgaca  
tcgccgtggagtgaggagcaatgggcagccggagaacaactacaagaccacgcctcccgtgctggactccgacggct  
ccttcttctctacagcaagctcaccgtggacaagagcaggtggcagcaggggaacgtcttctcatgctccgtgatgatg  
aggctctgcacaaccactacacgcagaagagcctctccctgtctccgggtaaatga

## Figure 9

### (B) Short form soluble IGSF9-Ig protein sequence

mvwclglavlsvisqgadgrgkpevvsvvgracesvvlgcdllppagrpplhviewlrfgflpifiqfglyspripd  
yvgrvrlqkgaslqieglrvedqgwyecrvffldqhipeddfangswvhltnspqqfgetppavlevqelepvtlrcv  
argsplphvtwklrgkdlgqgqgqvqngtlrrivergssgvytcqasstegsathatqllvlgppvivvppknstvn  
asqdvslachaeaypanltyswfqdninvfhisrlqprvqilvdgslrlatqpddagcytcvpsngllhppsasayltvl  
cmpgvircpvranppllfvswtkdgalqldkfpgwsqgtegslialgnedalgeysctpynslgtagpspvtrvllka  
ppafierpkeeyfqevgrellipcsaqgdpppvswtkvgrglqgqaqvdsnsslirpltkeahghweccasnavar  
vatstnvylvlgtspvhvtnsvvalpkganvswepgfdggylqrfsvwytplakrpdrmhhdwvslavpvgaahl  
vpqlqphqtqyqfsvlaqnklgsgpfseivlsapeglpttpaapglppteippplspprglvavrtprgvllhwdppelvp  
krlldgyvlegrqgsqgwevldpavagetellvpqlikdvlyefrlvafagsfvdspsntanvstsglevypsrtqlpgll  
ppqssqepkssdkthtspspapellggpsvflfppkpkdtlmsrtpevtcvvvdvshedpevkfnwyvdgvevh  
naktkpreeqynstyrvsvltvlhqdwlngkeykckvsnkalpapiektiskakgqprepqvylppsrdeltknqv  
sltclvkgfypsdiavewesngqpennykttpvldsdgsfflyskltvdksrwqqgnvfscsvmhealhnhytqksl  
slspgk\*

## Figure 9

### (C) Long form soluble IGSF9-Ig nucleotide sequence

atggtgtggtgcctcggcctggccgtcctcagcctggtcatcagccaggggggtgacggtcgaggggaagcctgaggtgg  
taccggtggtgggcccgggctgaggagagtgtggtgctgggctgtgacctgctgccccggccggccggccccccctgca  
tgtcatcgagtggctgcgctttgattcctgcttccatcttccatccagttcggcctctacttccccgaattgacctgattacg  
tgggacgagtcgggctgcagaagggggcctctctccagattgagggctcgggtggaagaccagggctggtacgagt  
ccgctgttcttctggaccagcacatccctgaagacgattttgtaacggctcctgggtgcatctgacagtaattcacccc  
ctcaattccaggagacacctcctgctgtgtggaagtgcaggaactggagcctgtgacctgcgttgtgtggcccggtggca  
gccccctgctcatgtgacgtggaagctccgaggaaggaccttggccagggccagggccaggtgcaagtgcagaacg  
ggacgctgcggatccgggtagagcgagggcagctctggggtctacacctccaagcctccagcactgagggcagcg  
ccaccacgccaccagctgtagtgtaggacccccagtcacgtggtgcccccaagaacagcacagtcaatgcctcc  
caggatgtttcattggcctgccatgctgaggcataacctgtaacctcacctacagctggttccaggacaacatcaatgtctt  
cacattagccgcctgcagccccgggtgcagatcctggtggacgggagcctgcggctgctggccaccagcctgatgatg  
ccggctgctacacctgtgtgccagcaatggcctcctgcatccacctcagcctctgcctacctactgtgcttaccagc  
ccaggtgacagctatgctcctgagacaccttgcctataggcatgccgggggtgatccgctgcccgggtcgtgccaacc  
ccccactgctctttgtagctggaccaaggatggaaggccctgcagctggacaagttccctggctggtcccagggcaca  
gaaggctcactgatcctgccttggggaacgaggatgcctgggagaatactcctgcacccctacaacagctcttggtac  
cgccgggcccctcctgtgacctgcgtgctgctcaaggctccccagcttttatagagcgcccaaaggaagaatattcca  
agaagtagggcgaggagctgctatccccctgctccgccaagggggacctcctcctgttgtctcttgaccacaagggtgggccc  
gggggctgcaaggccagggccaggtggacagcaacagcagcctatcctgcgacctgaccaaggaggccacggg  
cactgggaatgcagtgccagcaatgctgtggcccagtgggccacctccacgaacgtctacgtgctgggcactagccctca  
tgttgcaccaatgtgtccgtggtggtttgccaagggtgccaatgtctcctgggagcctggctttgatggtggttatctgca  
gagattcagtgctgtgtacccccactggccaagcgtcctgaccgaatgcacctgactgggtgcttggcagtgctgtg  
ggggtgctcacctcctagtgccagggtgcagccccacaccagttaccagttcagcgtgtagctcagaacaagctgg  
ggagtgttccttcagcgaaatcgtcttgtctgctccggaagggttctaccacgccagctgcacccgggcttccccaa  
cagagataccgcctccccctgtcccctccgcggggctgtgtggcagtgaggacacccgggggtactcctgattgggat  
ccccagagctgggtccctaagagactggatggctacgtcttggaaaggccggcaaggctcccagggtgggaggtgctgg  
acccggctgtggcaggcacagaaacagagctgctggtgccaggcctcatcaaggatgttctctacagttccgcctcgtg  
gccttcgcgggcagcttcgtcagcgacccacagcaacacggccaacgtctccacttccggtctggaggtctaccttcgcg  
cacgcagctgccgggctcctgctcagccctctagccaggagcccaaaagctctgacaaaactcacatccccaccgt  
ccccagcacctgaactcctggggggaccgtcagttctcttcccccaaaacccaaggacacctcatgatctcccga  
cccctgaggtcacatgcgtggtggtggacgtgagccacgaagacctgaggtcaagttcaactggtacgtggacggcgt  
ggaggtgcataatgccaaagccgcgggaggagcagtaaacagcacgtaccgtgtggtcagcgtcctaccgt  
cctgcaccaggactggctgaatggcaaggagtacaagtgaaggctccaacaaggccctcccagccccatcgagaaa  
accatctcaaagccaaagggcagccccgagaaccacaggtgtacacctgccccatccgggatgagctgaccaag  
aaccaggtcagcctgacctgcctgtcaaaggcttctatccagcgacatcgccgtggagtgggagagcaatgggcagc  
cggagaacaactacaagaccacgcctcccgtgctggactccgacggctccttcttctctacagcaagctcaccgtggaca  
agagcaggtggcagcaggggaacgtcttctcatgctccgtgatgcatgaggctctgcacaacctacacgcagaagag  
cctctccctgtctccgggtaaatga

## Figure 9

### (D) Long form soluble IGSF9-Ig protein sequence

mvwclglavlsvisqgadgrgkpevvsvvgraeesvvlgcdllppagrpplhviewlrfgflpifiqfglyspripd  
yvgrvrlqkgaslqieglrvedqgwyecrvffldqhipeddfangswvhltnsppqfgetppavlevqelepvtlrcv  
argsplphvtwklrgkdlgqgqgvqvqngtlrrivergssgvytcqasstegsathatqllvlgppvivvppknstvn  
asqdvslachaeaypanltyswfdninvfhisrlqprvqilvdgslrlatqpddagcytcvpsngllhppsasayltvl  
ypaqrtampptplpigmpgvircpvrnppllfvswtkdgalqldkfpqwsqgtegslialgnedalgeysctpy  
nslgtagpspvtrvllkappafierpkeeyfgevgrellipcsaqgdpppvswtkvgrglqgqaqvdnssllrpltk  
ahghwecsasnavarvatstnvylgtsphvtnvsvvalpkganvswepgfdggylqrfsvwytplakrpdrrmhh  
dwvslavpvgaahllvpqlphtqyqfsvlaqnklsgspfselvsapeglpttpaapglppteippplspprglvavrt  
prgvllhwdppelvpkrlldgyvlegrqgsqgwevldpavagetellvpqlikdvllyefrlvafagsfvsdpsntanvst  
sglevypsrtqlpgllpqpssepksdkthtsppspapellggpsvflfppkpkdtlmsrtpevtcvvvdvshedpev  
kfnwyvdgvevhnaktkpreeqynstyrvvsvltvlhqdwlngkeykckvsnkalpapiektiskakgqprepvy  
tlppsrdeitknqvsltlcvkgfypsdiavewesngqpennykttpvldsdgsfflyskltvdksrwqqgnvfscsvm  
healhnhytqkslsispk

## Figure 9

### (E) Long form full length IGSF9 nucleotide sequence

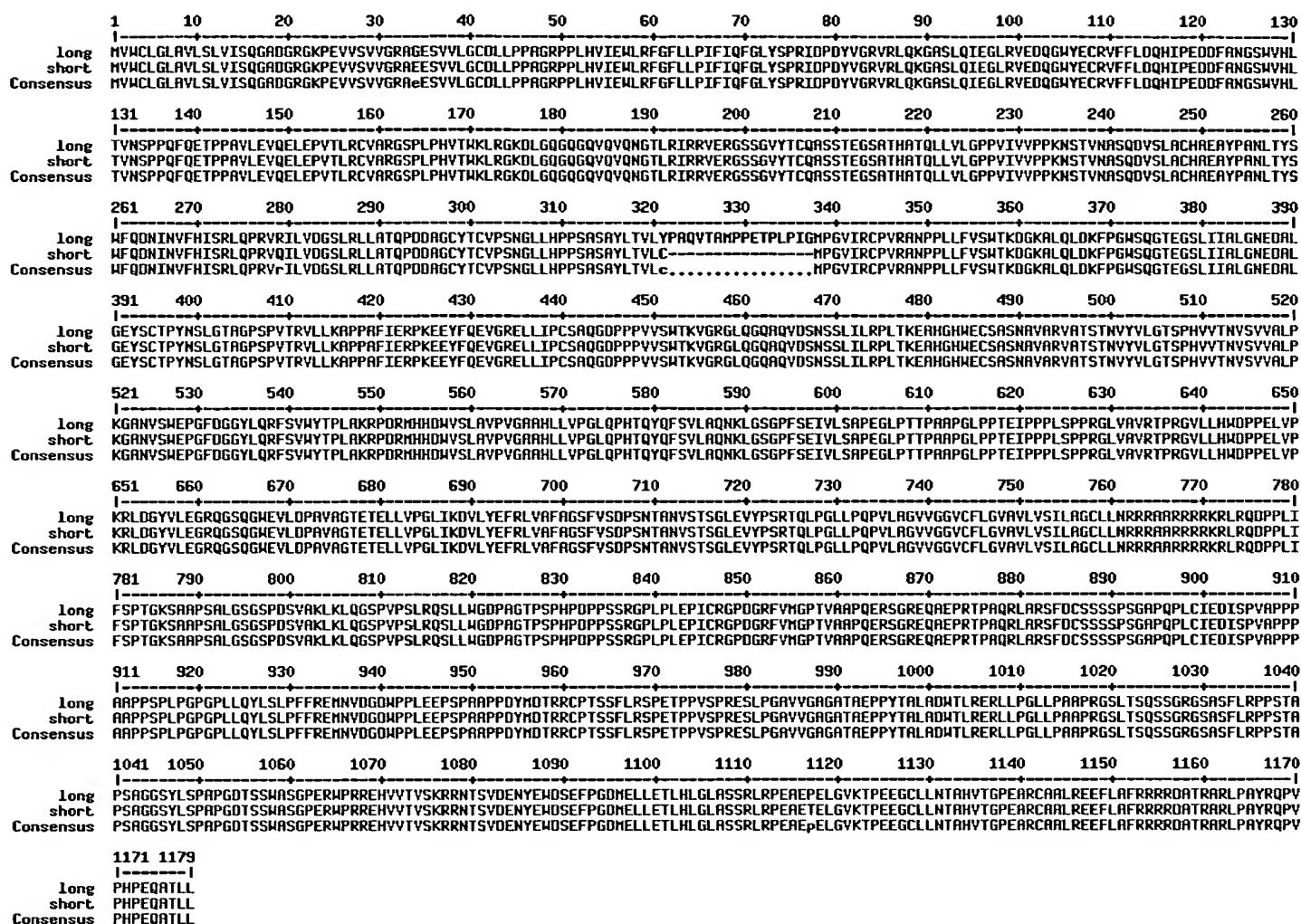
atggtgtggtgcctcggcctggccgtcctcagcctggatcatcagccaggggggtgacggctcaggggaagcctgaggtgg  
taccggtggtggccgggctggggagagtgtggtgctgggctgtgacctgctgccccggccggccggccccccctgc  
atgtcatcagtggtgcgctttgattcctgcttcccatcttccatccagttcggcctctacttccccgaattgacctgattac  
gtgggacgagtcgggtgcagaagggggcctctctccagattgagggctcctcgggtggaagaccagggctggtacgagt  
gccgctgttcttctggaccagcacatccctgaagacgattttgctaacggctcctgggtgcatctgacagtcattcacc  
cctcaattccaggagacacctcctgctgtgttgaagtgcaggaactggagcctgtgacctgcgttgtgtggccgtggc  
agccccctgcctcatgtgacgtggaagctccgaggaaaggaccttggccagggccagggccaggtgcaagtgcagaac  
gggacgctgcggtccggttagagcagggcagctctgggtctacacctgccaagcctccagcactgagggcagc  
gccaccacgccaccagctgctagtctaggacccccagtcacgtggtgcccccaagaacagcacagtcaatgcct  
cccaggatgtttcattggcctgccatgctgaggcataacctgtaacctcacctacagctggtccaggacaacatcaatgtc  
ttccacattagccgcctgcagccccgggtgcggatcctggtggacgggagcctgcggctgctggccaccagcctgatg  
atgccggctgctacacctgtgtgccagcaatggcctcctgcatccacctcagcctctgcctacctactgtgctctacca  
gcccaggtgacagctatgcctcctgagacaccttgcctataggcatgccgggggtgatccgtgcccgggtcgtgcaa  
ccccccactgctttgtcagctggaccaaggatggaaggccctgcagctggacaagttccctggctggtcccaggga  
cagaaggctcactgatcatcgccctggggaacgaggtgccctgggagaatactcctgcacccctacaacagtcttgg  
accgccgggcccctcctgtgacctgcgtgctcaaggctccccagctttatagagcgcccaaggagaataattc  
caagaagtagggcgggagctgctcatccccgtctccgccaaggggaccctcctcctgtgtctcttggaccaagggtggg  
ccgggggctgcaaggccaggccaggtggacagcaacagcagcctcatcctgcgaccattgaccaaggaggccacg  
ggcactgggaatgacgtgccagcaatgtgtggcccagtgccacctccacgaacgtctacgtgctgggactagccct  
catgttgcaccaatgtgtccgtggtggctttgccaagggtgccaatgtctcctgggagcctggctttgatggtggtatctg  
cagagattcagtgctgtgtacaccttggccaagcgtcctgaccgaatgcacatgactgggtgctctggcagtgct  
gtgggggctgctcacctcctagtgccagggtgcagccccacaccagtagcagttcagcgtgctagctcagaacaagct  
gggagtggtccctcagcgaaatcgtctgtctcctcgggaagggttcttaccacgccagctgcacccgggcttcccc  
aacagagataccgcctcccctgtcccctccgcgggggtctggtggcagtgaggacaccccggggggtactcctgcattgg  
gatccccagagctggtccctaagagactggatggctacgtcttgaaggccggaaggctcccagggtgggaggtgc  
tggaaccggctgtggcaggcacagaaacagagctgtgtgtgccaggcctcatcaaggatgttctctacgattccgcctc  
gtggccttcgcgggcagcttcgtcagcgacccagcaacacggccaacgtctccacttccgctcggaggtctacccttcg  
cgacgcagctgccgggctcctgctcagcccgtgtggccggcgtggtggcgaggctgtcttctgggagtgggcg  
tccctgtgagcatcctggccggctgcctcctgaaccggcgaggggtgcccgccgccgcaagcgctccgccaaaga  
tccacctcttatcttctcctccgaccgggaagtcagctgcacctctgctctgggctcaggcagtcctgacagcgtggcgaag  
ctgaagctccagggtatccccagctccccagcctgcgccagagtctgctctggggggatcctgccggaactcccagcccc  
accggatctccatctagccggggacccttacctctggagcccatttgcgggggccagacgggcgcttctgtatgggg  
cccactgtggcgccccccaggaaaggctcaggccgggagcaggcagaacctcggactccagcccagcgtctggccc  
gtcctttgactgtagcagcagccccagtggggcacccagccccctctgattgaagacatcagccctgtggcacccc  
ctccagcagccccacccagtccttggcaggctcctggaccctgtcctcagctgagcctgcccttcttccgagagatga  
atgtggatggggactggcccccgcttggaggccagcctgctgcacccccagattacatggataccggcgctgtccc  
acctcatcttcttctgttctccagaaacccctcctgtatccccagggaatcacttctggggctgtggtaggggctggggc  
cactgcagagcccccttacacagccctggctgactggacactgagggagcggctgctgccaggccttctcctgctgcc  
ctcagggcagcctcaccagccagagcagtgggcgaggcagcgcttctcctgcggccccctccacagccccctctgc  
aggaggcagctacctcagccctgtccaggagacaccagcagctgggccagtgccctgagagatggccccgaagg  
agcatgtggtgacagtcagcaagaggaggaacacatctgtggacgagaactatgagtgggactcagaattccctgggga  
catggaattgctggagactttgcacctgggcttggccagctcccggctcagacctgaagctgagccagagctaggtgtgaa  
gactccagaggagggtgctcctctgaacactgcccatgttactggccctgagggccgctgtgctgcccttcgggaggaatt  
cctggccttcggccgccgagatgctactagggctcggtaccagcctatcgacagccagctccccacccgaacag  
gccactctgctgtga

## Figure 9

### (F) Long form full length IGSF9 protein sequence

mvwclglavlsvisqgadgrgkpevvsvvgragesvvlgcdllppagrpplhviewlrfgflpifiqfglyspripd  
yvgrvrlqkgasliqieglrvedqgwyecrvffldqhipeddfangswvhltnsppqfquetppavlevqelepvtlrcv  
argspiphvtwklrgkdlgqgqgvqngtlrivrvergssgytcqasstegsathatqlllvlgppvivvppknstvn  
asqdvslachaeaypanltyswfqdninvfhisrlqprvirilvdgslrlatqpddagcytcvpsngllhppsasayltvly  
paqvtamppetplpigmpgvircpvrappllfvswtkdgalqldkfpqgwsqgtegslialgnedalgeysctpyn  
slgtagpspvtrvllkappaferpkeeyfqevgrellipcsaqgdpppvswtkvgrglgqqaqvdssslilrplkea  
hghwecsasnavarvatstnvylgtsphvvtvsvvalpkganvswepgfdggylqrfsvwytplakrpdrrmhhd  
wvslavpvgaahllvpqlphtqyqfsvlaqnklsggpfseivlsapeglpttpaapglppteippplspprglvavrtpr  
gvllhwdppelvpkrlldgyvlegrqgsqgwevldpavagetellvpqlikdvlvlefrlvafagsfvdspsntanvstsg  
levypsrtqlpgllpqpvlagvvggvcflgvavlvsilagcllnrrraarrkrkrldpplifspgksaapsalgsqspds  
vaklklqgspvpslrqslwgdpagtpsphpdppssrgpllepicrgpdgrfvmgptvaapqersgreqaeptrpaq  
rlarsfdcssspsgapqplciedisvappaappsplpgpgpllqylslpffremnvdgdwppleepsaappdy  
mdtrrcptssflrspetppvspreslpgavvgagataeppytaladwtlrrerllpgllpaaprgsltsqssgrgsasflrppst  
apsaggsylspapgdtsawasgperwprrehvvtvskrrntsvdenyewdsefpgdmelletihlglassrlrpeape  
lgvktpeegcllntahvtgpearcaalreeflafrrrdatrarlpayrqpvphpeqatil

**(G)Protein sequence comparison of long and short form IGSF9**



## Figure 9

### (H) Nucleotide sequences of alternate splice forms of IGSF9 in the region of exons 5-11 sequenced from tumor xenograft samples

#### NCI-H69 IGSF9 fragment - clone 1

caggaactggagcctgtgacctgcgttgtgtggcccgtggcagccccctgcctcatgtgacgtggaagctccgagggaaa  
ggaccttggccagggccagggccaggtgcaagtgcagaacgggacgctgcggatccgccgggtagagcgaggcagc  
tctggggtctacacctgccaagcctccagcactgagggcagcgccaccacgccaccagctgctagtctaggacccc  
cagtcacgtgtgtgccccccaagaacagcacagtcaatgcctcccaggatgtttcattggcctgccatgctgaggcatacc  
ctgctaacctcacctacagctggttccaggacaacatcaatgtcttccacattagccgcctgcagccccgggtgcggatcct  
ggtggacgggagcctgcggctgctggccaccagcctgatgatgccggctgctacacctgtgtgccagcaatggcctc  
ctgcatccaccctcagcctctgcctacctcactgtgctctgtaagcctgacctcagcttctccctcagcctgctccctccctg  
ggccaggccaagccccctctccccaacttgccactatttccccagaccagcccagggtgacagctatgcctcctgagac  
accctgcccataggaatgccgggggtgatccgctgccgggtcgtgccaacccccactgctcttctgacgtggacca  
ggatggaaaggccctgcagctggacaagaagagagatgatctctggggaaaatgatggcaaagagtcaagaaggagaa  
ctgaagttcttctgtgtgatgactgggaaattgtgtgtcccgggggaatacacacttctaccagttccctggctgtcccag  
ggcacagaaggctcactgatcatcgccctgggggaacgaggatgcctgggagaatactcctgcacccccctacaacagtct  
tggtaccgccgggccctctcctgtgaccgcgtgctgtcaaggctccccagcttttatagag

#### NCI-H69 IGSF9 fragment - clone 2

caggaactggagcctgtgacctgcgttgtgtggcccgtggcagccccctgcctcatgtgacgtggaagctccgagggaaa  
ggaccttggccagggccagggccaggtgcaagtgcagaacgggacgctgcggatccgccgggtagagcgaggcagc  
tctggggtctacacctgccaagcctccagcactgagggcagcgccaccacgccaccagctgctagtctaggacccc  
cagtcacgtgtgtgccccccaagaacagcacagtcaatgcctcccaggatgtttcattggcctgccatgctgaggcatacc  
ctgctaacctcacctacagctggttccaggacaacatcaatgtcttccacattagccgcctgcagccccgggtgcggatcct  
ggtggacgggagcctgcggctgctggccaccagcctgatgatgccggctgctacacctgtgtgccagcaatggcctc  
ctgcatccaccctcagcctctgcctacctcactgtgctctaccagcccagggtgacagctatgcctcctgagacaccctgc  
ccataggcatgccgggggtgatccgctgccgggtcgtgccaacccccactgctcttctgacgtggaccaaggatgga  
aaggccctgcagctggacaagaagagagatgatctccggggaaaatgatggcaaagagtcaagaaggagaactgaagt  
ttcttctgtgtgatgactgggaaattgtgtgtcccgggggaacacacacttctaccagttccctggctgtgtcccagggcaca  
gaaggctcactgatcatcgccctgggggaacgaggatgcctgggagaatactcctgcacccccctacaacagtcttgga  
ccgccggggccctctcctgtgaccgcgtgctgtcaaggctccccagcttttatagag

#### Ovcar-3 IGSF9 fragment - clone 1

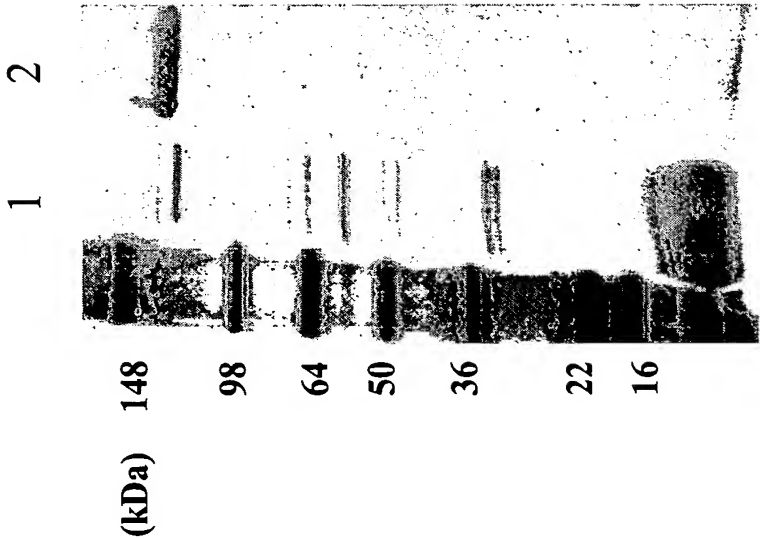
caggaactggagcctgtgacctgcgttgtgtggcccgtggcagccccctgcctcatgtgacgtggaagctccgagggaaa  
ggaccttggccagggccagggccaggtgcaagtgcagaacgggacgctgcggatccgccgggtagagcgaggcagc  
tctggggtctacacctgccaagcctccagcactgagggcagcgccaccacgccaccagctgctagtctaggacccc  
cagtcacgtgtgtgccccccaagaacagcacagtcaatgcctcccaggatgtttcattggcctgccatgctgaggcatacc  
ctgctaacctcacctacagctggttccaggacaacatcaatgtcttccacattagccgcctgcagccccgggtgcggatcct  
ggtggacgggagcctgcggctgctggccaccagcctgatgatgccggctgctacacctgtgtgccagcaatggcctc  
ctgcatccaccctcagcctctgcctacctcactgtgctctctggaccaaggatggaaaggccctgcagctggacaagaaga  
gagatgatctctggggaaaatgatggcaaagagtcaagaaggagaactgaagttcttctgtgtgatgactgggaaattgtg  
tgtcccgggggaacacacacttctaccagttccctggctgtgtcccagggcacaagaaggctcactgatcatcgccctgggg  
aacgaggatgcctgggagaatactcctgcacccccctacaacagtcttggtaccgccgggccctctcctgtgaccgcgt  
gctgctcaaggctccccagcttttatagag

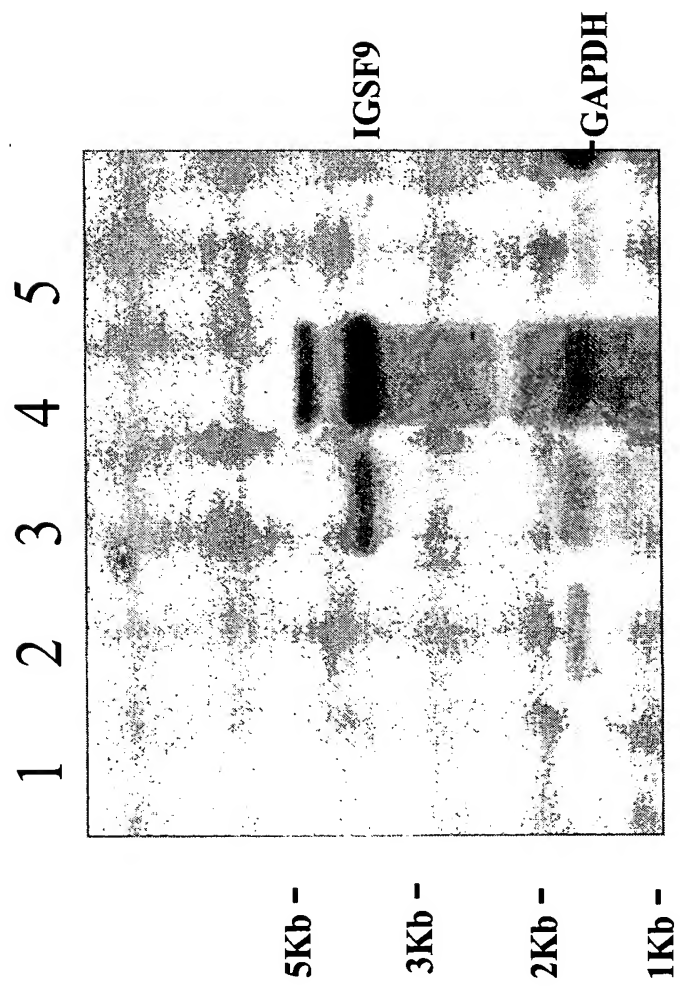
## 9H Continued

### Ovcar-3 IGSF9 fragment - clones 2-4

caggaaactggagcctgtgaccctgcgttgtgtggcccgtggcagccccctgcctcatgtgacgtggaagctccgaggaaa  
ggaccttggccagggccagggccagggtgcaagtgcagaacgggacgctcgggatccgccgggtagagcgaggcagc  
tctgggggtctacacctgccaagcctccagcactgagggcagcggcaccacgccaccagctgctagtctaggacccc  
cagtcacgtgtgtgccccccaagaacagcacagtcaatgcctcccaggatgtttcattggcctgccatgctgaggcatacc  
ctgctaacctcacctacagctggttccaggacaacatcaatgtcttccacattagccgcctgcagccccgggtgcggatcct  
ggtggacgggagcctgcggctgctggccaccagcctgatgatgccggctgctacacctgtgtgccagcaatggcctc  
ctgcatccaccctcagcctctgcctacctactgtgctctaccagcccagggtgacagctatgcctcctgagacaccctgc  
ccataggcatgccgggggtgatccgctgcccgggtcgtgccaacccccactgctcttgcagctggaccaaggatgga  
aaggccctgcagctggacaagtccctggctgggtcccagggcacagaaggctcactgatcatcgccctggggaacgagg  
atgccctgggagaatactcctgcacccctacaacagtcttggtagccgggccctctcctgtgacccgcgtgctgctca  
aggctccccagcttttatagag

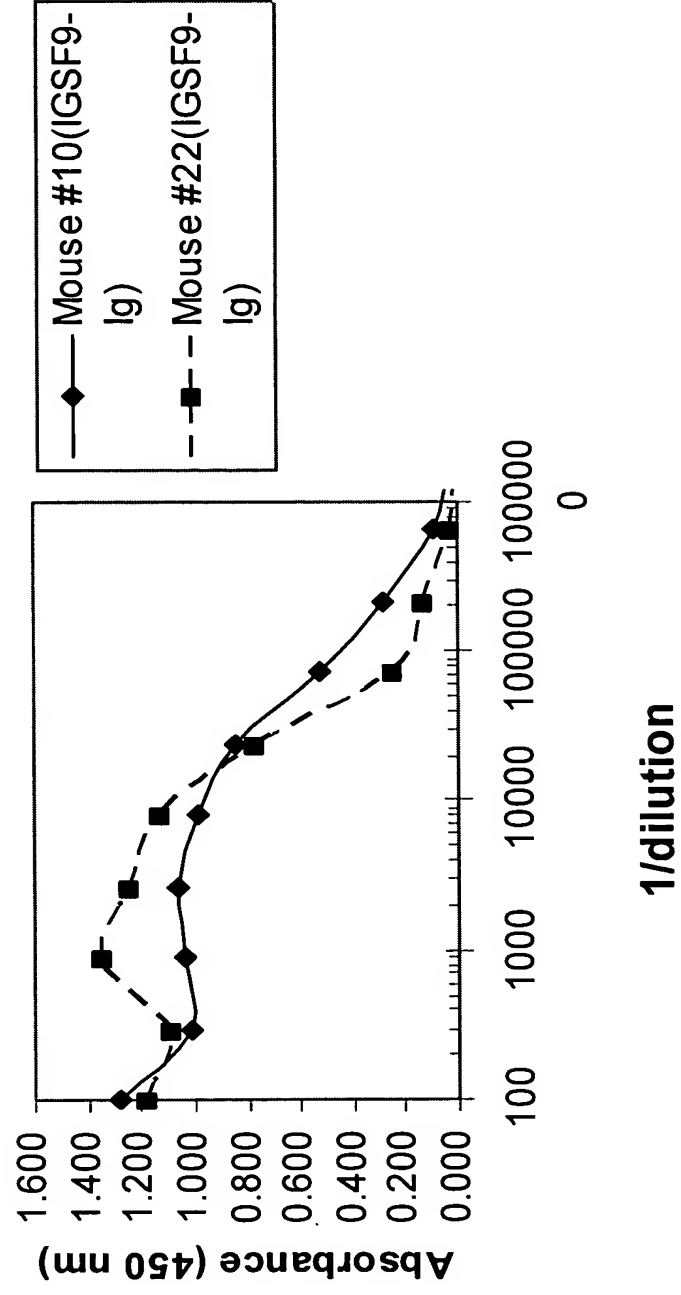
Figure 10

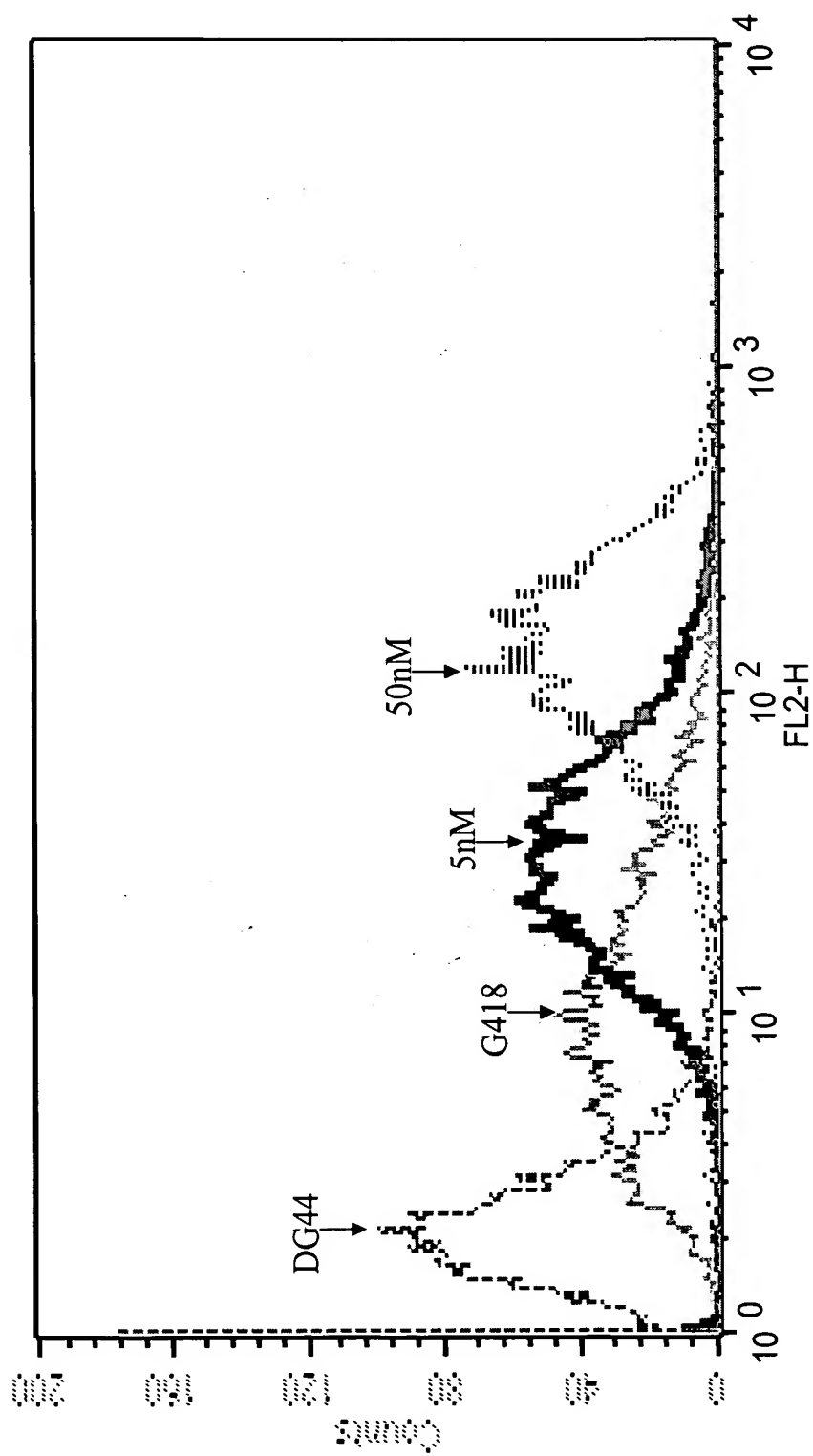




**Figure 11**

Figure 12





**Figure 13**

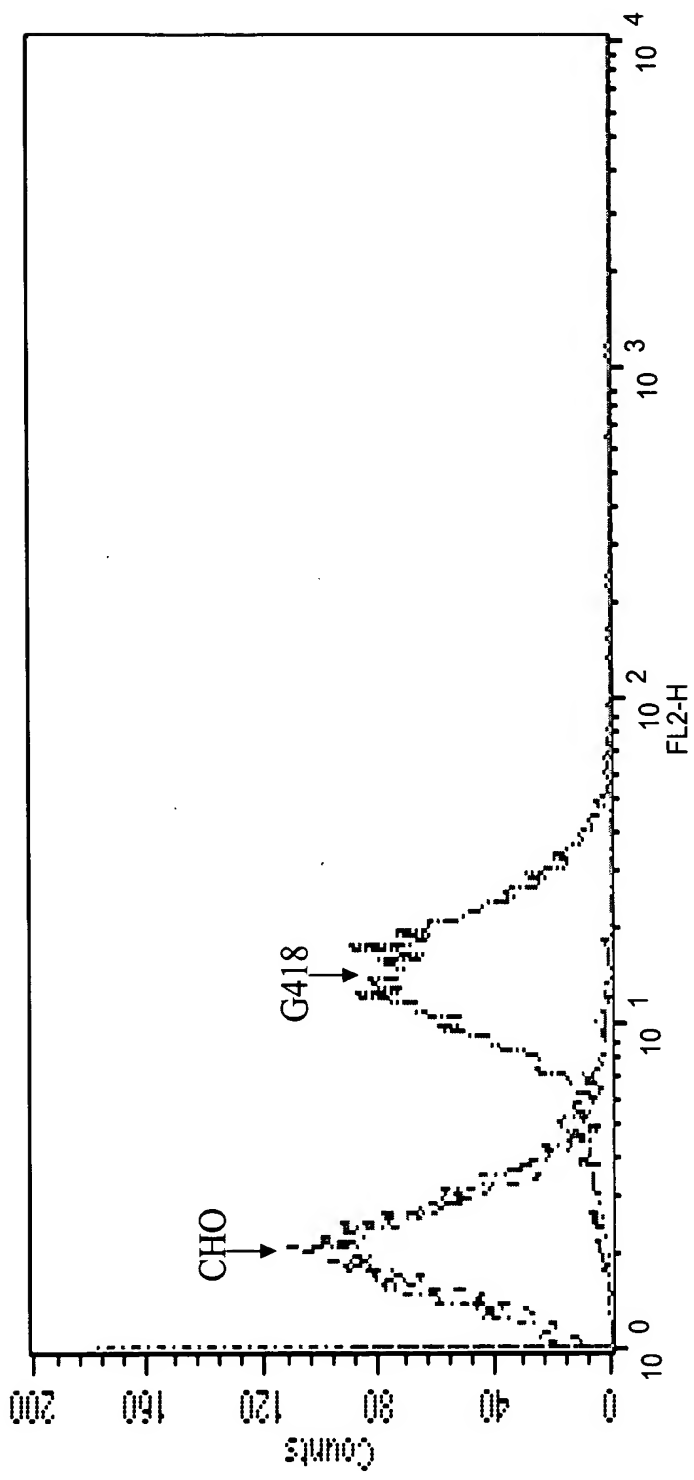
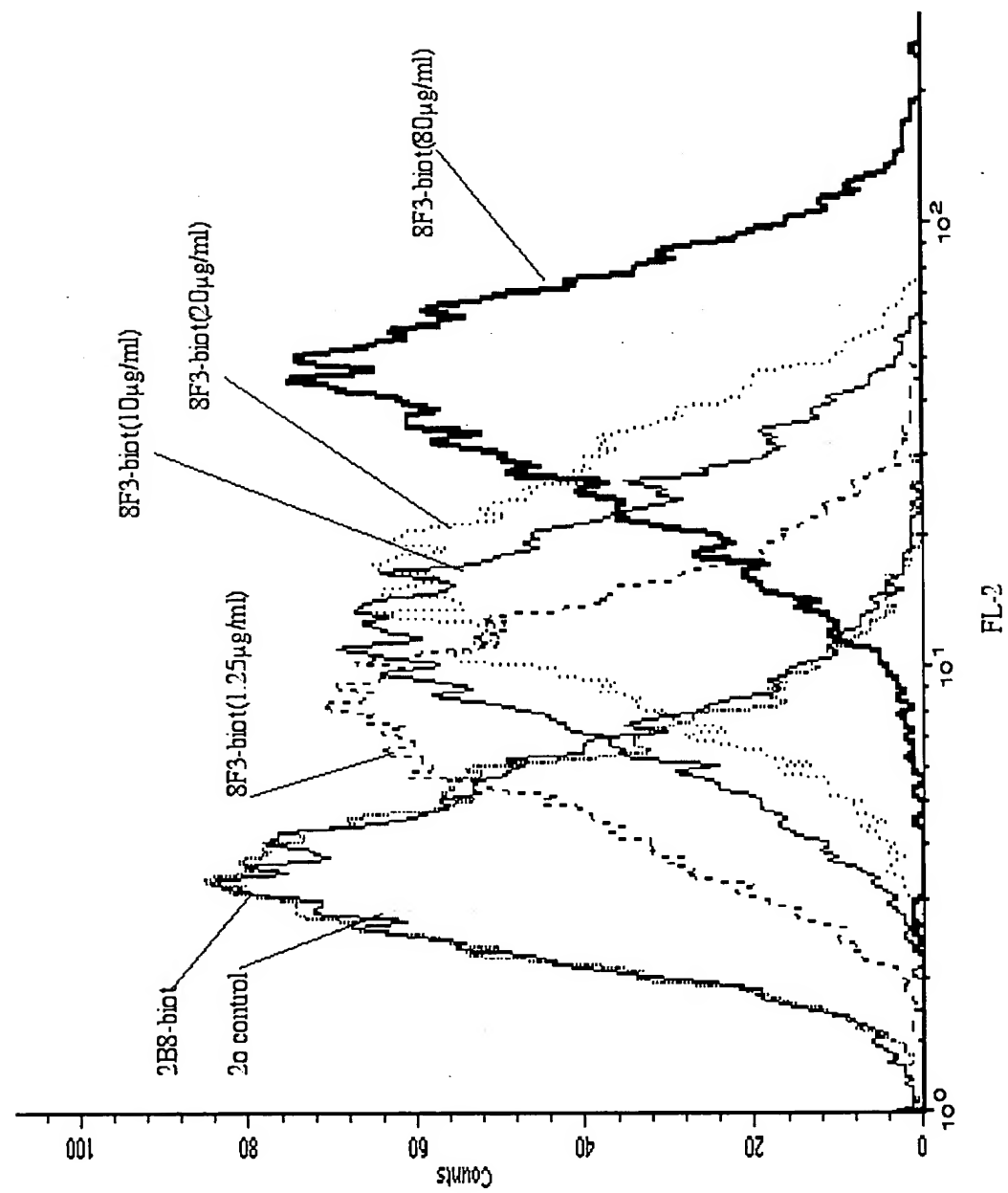
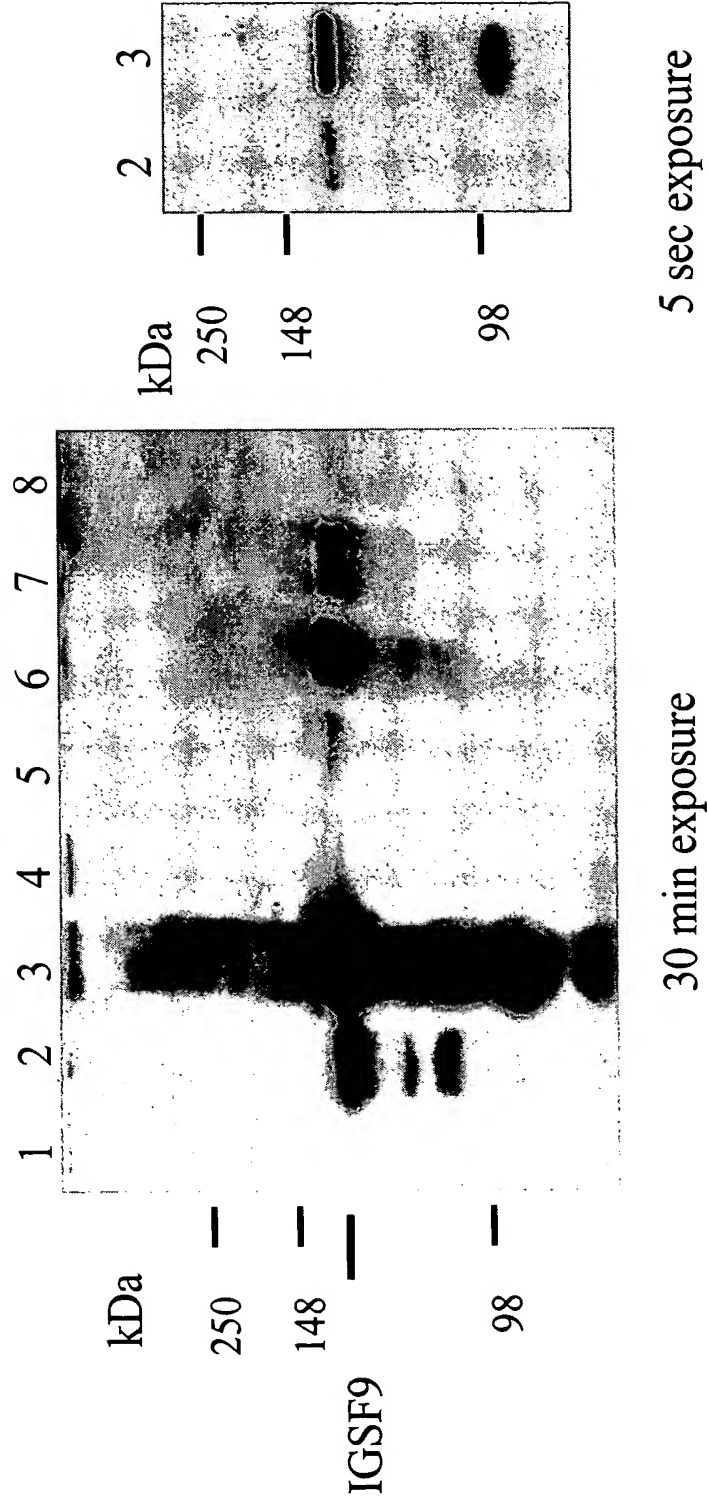


Figure 14

Figure 15





**Figure 16**

Figure 17

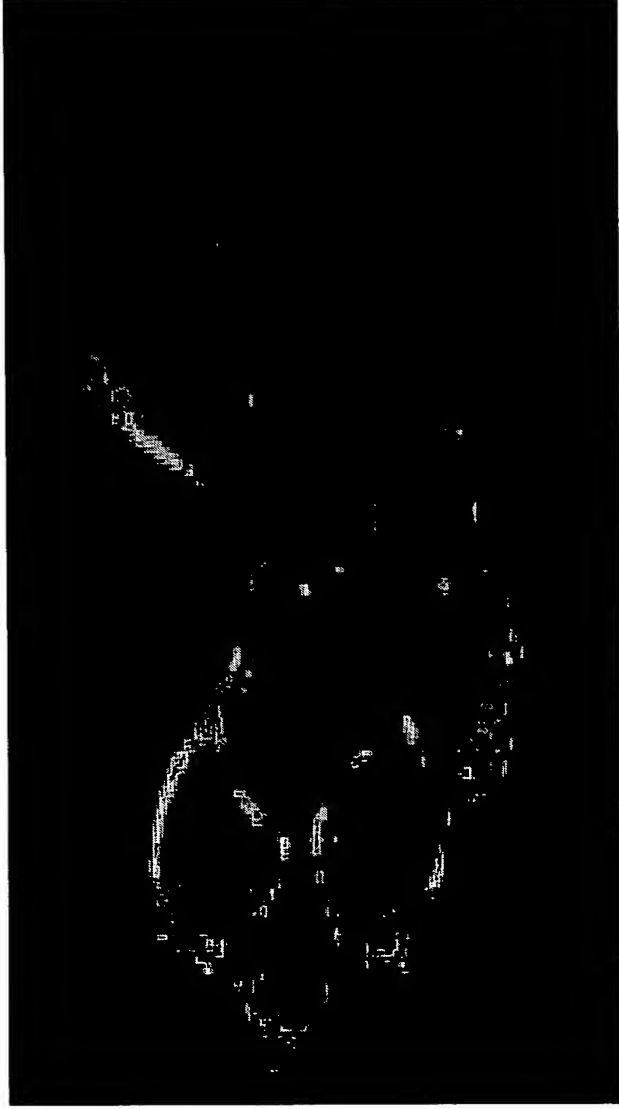
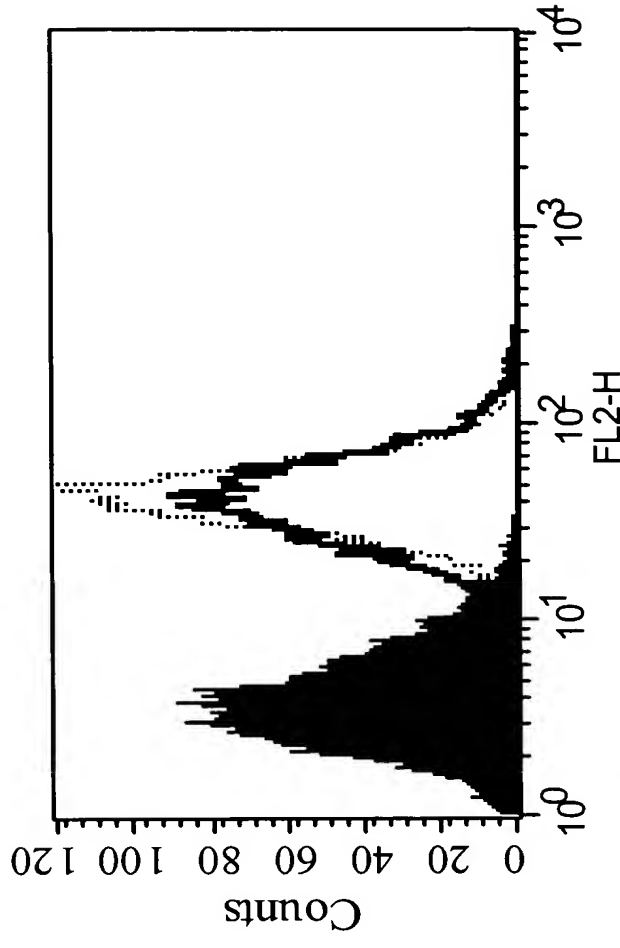
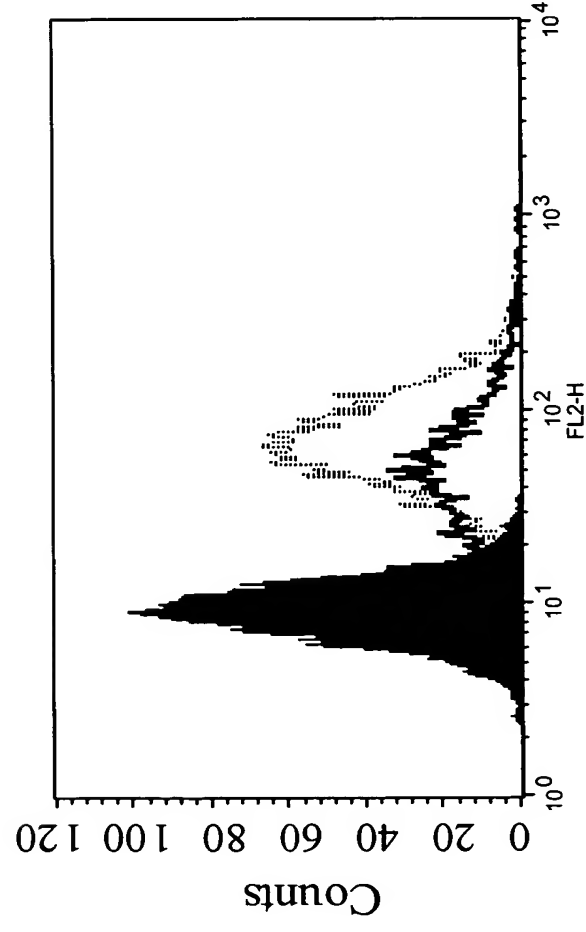


Figure 18

OVCAR3

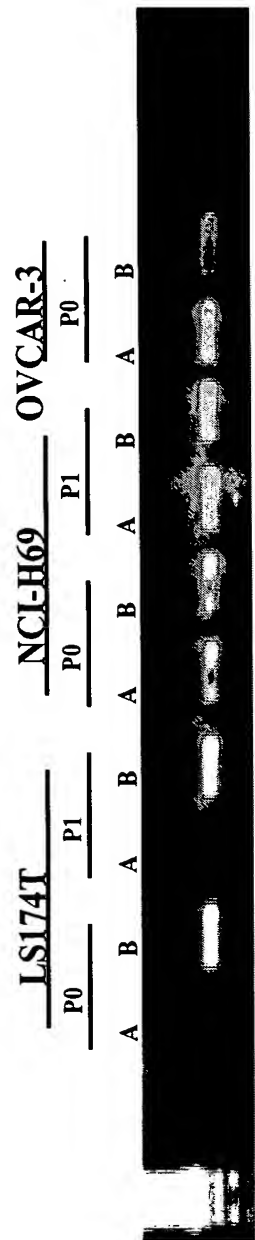
NCI-H69



PE fluorescence intensity

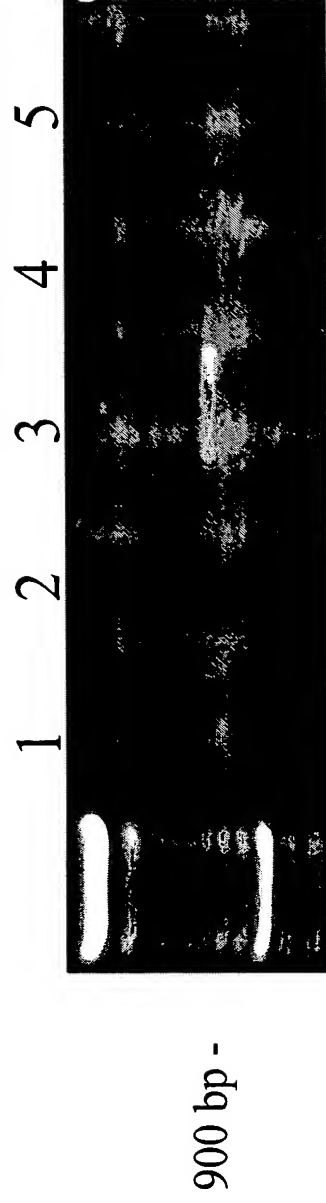
- Negative control
- ..... IGSF9 on cell line
- IGSF9 on xenograft

**Figure 19**



**A: IGSF9 – 444 bp**  
**B: GAPDH – 482 bp**

A



B

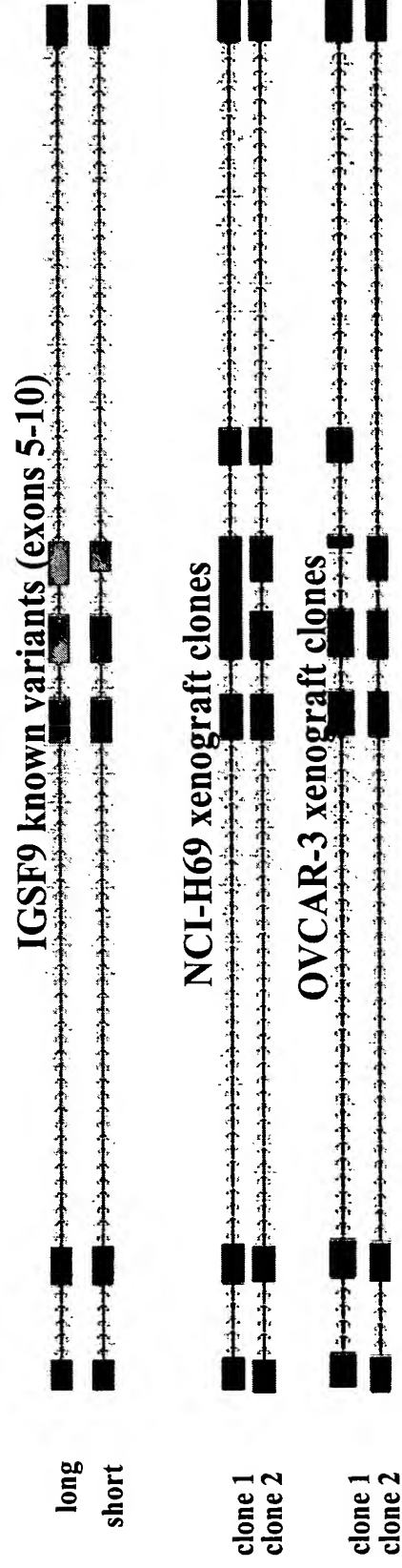


Figure 20

A

Section 17					
1137	1150	1160	1170	1180	1190
1	CTCTGCCTACCTCACTGTGCTCT				
2	CTCTGCCTACCTCACTGTGCTCT				
3	CTCTGCCTACCTCACTGTGCTCT				
4	CTCTGCCTACCTCACTGTGCTCT				
5	CTCTGCCTACCTCACTGTGCTCT				
6	CTCTGCCTACCTCACTGTGCTCT				
Section 18					
1208	1220	1230	1240	1250	1260
1					
2					
3					
4	CAGGCCAAGCCCCCTCCCCCAACTTGCACACTATTCCCCCAGACCCAGCCAGGTGACAGCTATGCCTC				
5					
6					
Section 19					
1279	1290	1300	1310	1320	1330
1	CTGAGACACCCCTGCCCATAGGCATGCCGGGGGTGATCCGGTCCCCGGTTCGTGCCAACCCCCCACTGCTC				
2	CTGAGACACCCCTGCCCATAGGCATGCCGGGGGTGATCCGGTCCCCGGTTCGTGCCAACCCCCCACTGCTC				
3					
4	CTGAGACACCCCTGCCCATAGGCATGCCGGGGGTGATCCGGTCCCCGGTTCGTGCCAACCCCCCACTGCTC				
5	CTGAGACACCCCTGCCCATAGGCATGCCGGGGGTGATCCGGTCCCCGGTTCGTGCCAACCCCCCACTGCTC				
6	CTGAGACACCCCTGCCCATAGGCATGCCGGGGGTGATCCGGTCCCCGGTTCGTGCCAACCCCCCACTGCTC				
Section 20					
1350	1360	1370	1380	1390	1400
1	TTTGTCAAGCTGGACCAAGGATGGAAAGGCCCTGCAGCTGGACAAG				
2	TTTGTCAAGCTGGACCAAGGATGGAAAGGCCCTGCAGCTGGACAAG				
3					
4	TTTGTCAAGCTGGACCAAGGATGGAAAGGCCCTGCAGCTGGACAAGAGAGATGATCTCTGGGGAAAATG				
5	TTTGTCAAGCTGGACCAAGGATGGAAAGGCCCTGCAGCTGGACAAGAGAGATGATCTCTGGGGAAAATG				
6	TTTGTCAAGCTGGACCAAGGATGGAAAGGCCCTGCAGCTGGACAAGAGAGATGATCTCTGGGGAAAATG				
Section 21					
1421	1430	1440	1450	1460	1470
1					
2					
3					
4					
5					
6					
Section 22					
1492	1500	1510	1520	1530	1540
1					
2					
3					
4					
5					
6					
Section 23					
1562	1570	1580	1590	1600	1610
1					
2					
3					
4					
5					
6					

Figure 21

B

Figure 21

	285	290	300	310	320	330	340	355
1	SRLRLATQPDDAGCYTCVPSNGLLHPPPSASAYLTVLYPAQVTAMPPEPLPIGMPGVIRCPVRANPPLLFV							
2	SRLRLATQPDDAGCYTCVPSNGLLHPPPSASAYLTVLYPAQVTAMPPEPLPIGMPGVIRCPVRANPPLLFV							
3	SRLRLATQPDDAGCYTCVPSNGLLHPPPSASAYLTVLSGRMERPCSWTRREMISGENDGKESRRRTEVSEV							
4	SRLRLATQPDDAGCYTCVPSNGLLHPPPSASAYLTVLCRDDLSELSLLPSPGGQAPLPQLATIFFPQTQPR							
5	SRLRLATQPDDAGCYTCVPSNGLLHPPPSASAYLTVLYPAQVTAMPPEPLPIGMPGVIRCPVRANPPLLFV							
6	SRLRLATQPDDAGCYTCVPSNGLLHPPPSASAYLTVLYPAQVTAMPPEPLPIGMPGVIRCPVRANPPLLFV							
	Section 6							
	356	370	380	390	400	410	426	
1	SWTKDGKALQLDKFPQSGTEGSLIIALGNEDALGEYSCTPYNSLGTAGSPVTRVLLKAPPAFIERPKE							
2	SWTKDGKALQLDKFPQSGTEGSLIIALGNEDALGEYSCTPYNSLGTAGSPVTRVLLKAPPAFIERPKE							
3	-----							
4	-----							
5	SWTKDGKALQLDKKRDDLGRK-WQRVKKN-----							
6	SWTKDGKALQLDK	G	I	-----				

## Figure 22A

Homo sapiens LIV-1 protein, mRNA

```
ATGGCGAGGAAGTTATCTGTAATCTTGATCCTGACCTTTGCCCTCTCTGTCAAAATCCCCCTTCATGAACATAAAGCAGCTGCTTTCCCCCAGACCACCTGA
GAAAATTAGTCCGAATTGGGAATCTGGCAATTTCCACACGGCAATATCATCTACAACAGCTTTTCTACCGCTATGGAGAAAAATA
ATTCTTTGTCAAGTGAAGGTTCAGAAAAATTACTTCAAATATAGGCATAGATAAGATTAAAGAATCCATATACCATGACACGACCATCACTCAGAC
CAGAGCATCACTCAGACCATGAGCGTCACTCAGACCATGAGCATCACTCAGACCCAGAGCATCACTCTGACCATAATCATGTGCTTCTGGTAAAAATAA
GCGAAAAGCTCTTTGCCCAGACCATGACTCAGATAGTTCAGGTAAGATCCTAGAAAACAGCCAGGGAAAGAGCTCACCGACCAGAACATGCCAGTGGTA
GAAGGAATGTCAAGGACAGTGTAGTGTAGTGAAAGTGACCTCAACTGTGTACAACACTGTCTCTGAAGGAACCTCACTTCTAGAGACAATAGAGACTCCA
AGACCTGGAAAAACTCTTCCCAAAGATGTAAGCAGCTCCACTCCACCCAGTGCACATCAAAGAGCCGGGTGAGCCGGTGGCTGGTAGGAAAAACAAATGA
ATCTGTGAGTGAGCCCCGAAAAAGGCTTTATGTATTCAGAAAAACAAAAATGAAAATCCTCAGGAGTGTTCAAATGCATCAAAGCTACTGACATCTCATGGCA
TGGGCATCCAGGTTCCGCTGAATGCAACAGAGTTCAACTATCTGTCCAGCCATCATCAACCCAAATTGATGCTAGATCTTGTCTGATTCATACAAGTGAA
AAGAAGCTGAAATCCCTCCAAAGACCTATTCAATTACAAATAGCCTGGGTTGGTGTGTTTTATAGCCATTTCCATCATCAGTTTCCCTGCTCTGCTGGGGT
TATCTTAGTGCCTCTCATGAATCGGGTGTTTTTCAAATTTCTCTGAGTTTCTTGTGGCACTGGCCGTTGGACTTTGAGTGGTGATGCTTTTTTACACC
TTCTTCCACATTTCTCATGCAAGTCAACCACATAGTCATAGCCATGAAGAACCAGCAATGGAATGAAAAGAGGACCACTTTTCAGTCACTCTGTCTTCTCAA
AACATAGAAGAAAGTGCCTATTTTGATTCCACGTGGAAGGCTTAACAGCTCTAGGAGGCCCTGTATTTTCATGTTTCTTGTGAACATGTCTCACAATTGAT
CAACAATTTAAAGATAAGAGAAAAAGAAATCAGAAAGAAACCTGAAAATGATGATGATGTGGAGATTAAAGAGCAGTTGTCCAAGTATGAATCTCAACTTT
CAACAAATGAGGAGAAAGTAGATACAGATGATCGAACTGAAGGCTATTTACGAGCAGACTCAAGAAGCCCTCCCACCTTGAATTCAGCAGCCTGCAGTC
TTGGAAGAAAGAGAGGTCAATGATAGCTCATGCTCATCCACAGGAAGTCTACAATGAATATGTACCCAGAGGGTGCAAGAAATAAATGCCATTCACTTTCCA
CGATACACTCGGCCAGTCAGACGATCTCATTCACCACCATCATGACTACCATCATATTCTCCATCATCACCACCAACCAACCAATCCTCACAGTCACA
GCCAGCGCTACTCTCGGGAGGAGCTGAAAGATGCCGGCGTCGCCACTTTGGCCTGGATGGTGATAATGGGTGATGGCCTGCACAAATTTTCAGCGATGGCCTA
GCAATTGGTGTGCTTTTACTGAAGGCTTATCAAGTGGTTTAAGTACTTCTGTTGCTGTCTGTCTCATGAGTTGCCCTCATGAATTAGGTGACTTTTGCTGT
TCTACTAAAGGCTGGCATGACCGTTAAGCAGGCTGTCTTTATAATGCATTGTCAGCCCATGCTGGCGTATCTTGGAAATGGCAACAGGAATTTTCATTGGTC
ATTATGCTGAAAAATGTTTCTATGTGGATATTTGCACCTTACTGCTGGCTTATTTCATGTATGTTGCTCTGGTTGATATGGTACCTGAAATGCTGCACAATGAT
GCTAGTGACCATGGATGAGCCGCTGGGGTATTTCTTTTACAGAAATGCTGGGATGCTTTTGGGTTTTTGGAAATTATGTTACTTATTTCCATATTTTGAACA
TAAAAATCGTGTTCGTATAAAATTTCTAG
```

## Figure 22B

Homo sapiens LIV-1 protein

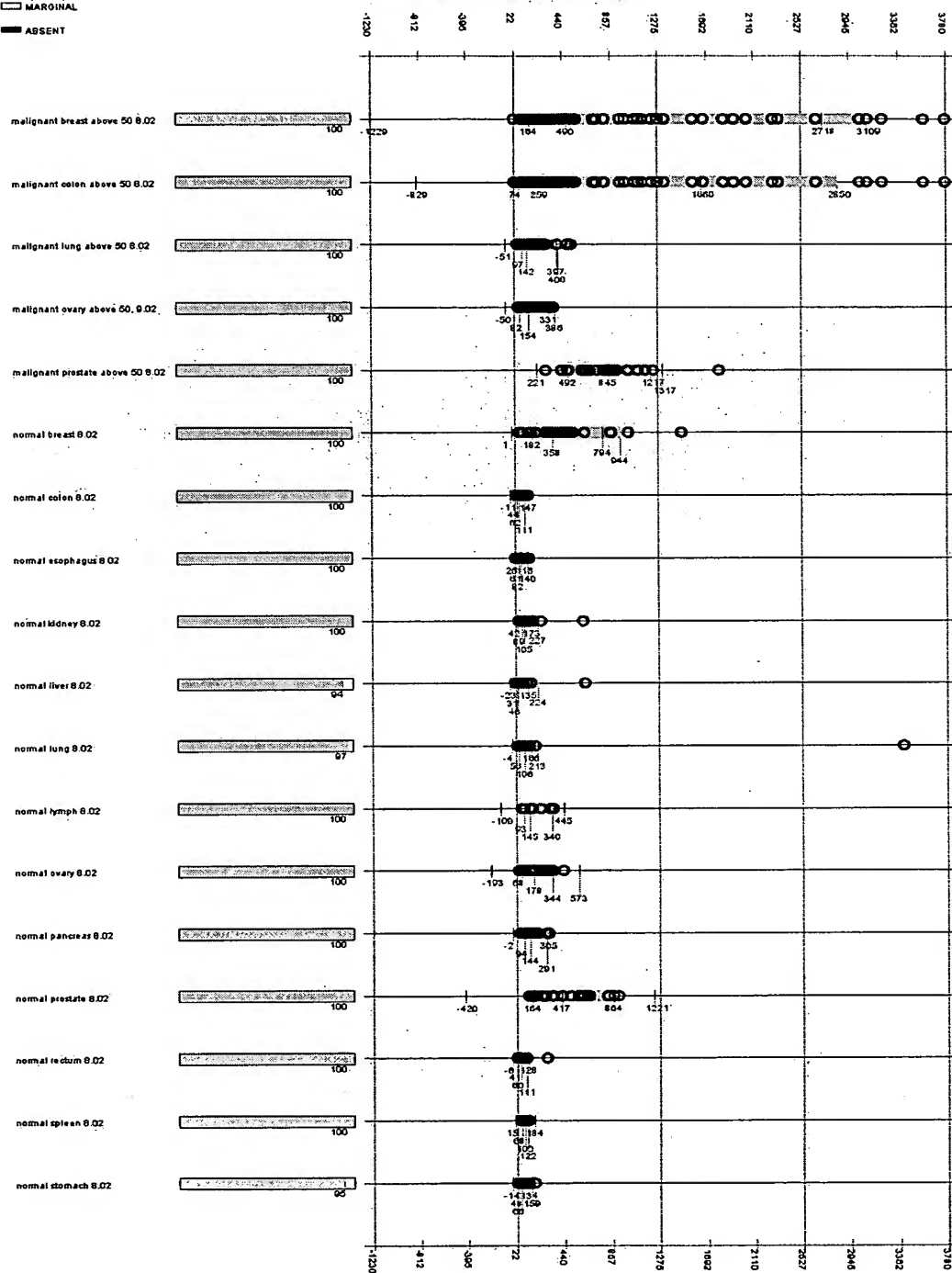
MARKLSVILILTFALSVTNPLHELKAAAFPQTTEKISPNWESGINVDLAISTRQVHLQQLFYRYGENNSLSVEGFRKLLQNIGIDKIKIRIHHDHDDHSD  
HEHSDHERHSDHEHSDHEHSDHNHAASGKNRKALCPDHDSDSSGKDPRNSQKGahrPEHASGRRNVKDSVASEVTSTVYNTVSEGTHFLETIETP  
RPGLFPKDVSSSTPPSVTSKSRVSRLAGRKTNESVSEPRKGFMYSRNTNENPQECFNASKLLTSHGMGIQVPLNATEFNYLCPAIINQIDARSCLIHTSE  
KKAEIPPKTYSLIQIAWVCGFIAISIISFLSLLGVILVPLMNRVFFKFLLSFLVALAVGTLSGDAFLHLLPHSHASHHHSHSHEEPAMEMKRGPLFSHLSSQ  
NIEESAYFDSTWKGLTALGGLYFMFLVEHVLTLTKQFKDKKKKQKPENDDVEIKKQLSKYESQLSTNEEKVDTDRTEGYLRADSQEPSHFDSQQPAV  
LEEEVMIAHAHPQEVNEYVPRGCKNKCHSHFDTLGQSDDLIHHHHYYHHILHHHHQNHHPHSHSQRYSREELKDAGVATLAWMVIMGDGLHNFSDGL  
AIGAAFTEGLSSGLSTSAVFCHELPHELGDFAVLLKAGMTVKQAVLYNALSAMLAYLGMATGGIFIGHYAENVSMWIFALTAGLFMYVALVDMVPEMLHND  
ASDHGCSRWGYFFLQNAGMLLGGIMLLISIFEHKIVFRINF

# Figure 23

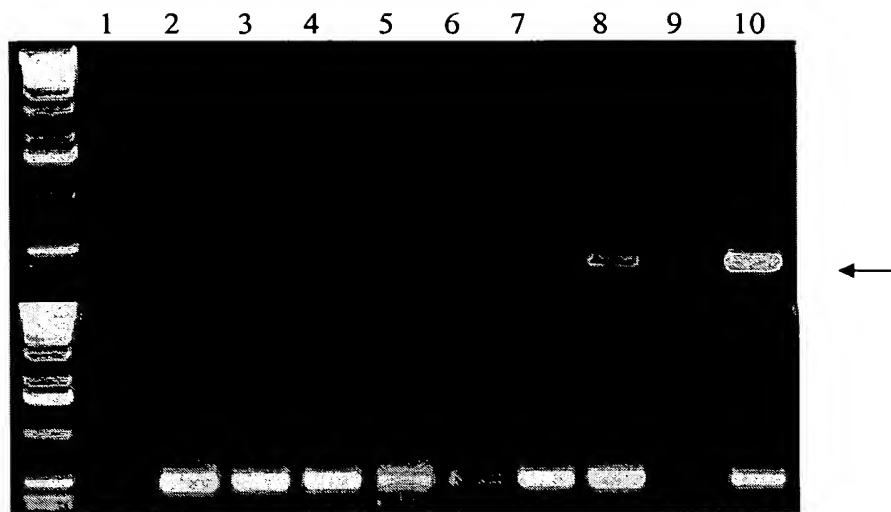
■ PRESENT  
 □ MARGINAL  
 ■ ABSENT

Atty Name : 202689\_s\_at

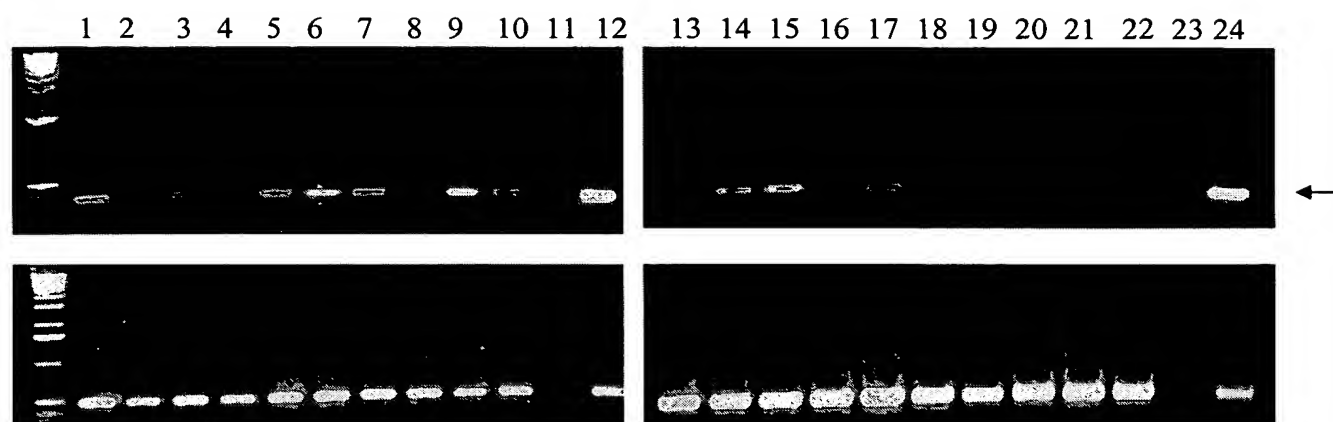
Cluster Name 1.V-1 protein, estrogen regulated



**Figure 24**



**Figure 25**



**Figure 26**

